

The CircleMaze, developed at Carnegie Mellon University's Entertainment Technology Center, is a multi-user interactive musical game that encourages team building and collaboration. Combining novel input devices with real-time computer graphics on an integrated tabletop surface, the CircleMaze brings together a group of players to participate in group gaming and music-making. Each player has a rotating circular disk that serves as an input device to control audiovisual aspects of the game.

#### GOALS

The CircleMaze is a spin-off from the Jam-O-Drum (SIGGRAPH 2000), which was developed at Interval Research between July 1998 and January 1999 under the direction of Tina (Bean) Blaine. The Jam-O-Drum used the metaphor of a digital community drum circle to give novice musicians the experience of ensemble music making in a casual social setting with real-time video and computer graphics. Expanding on this early primarily rhythmic input prototype, we have developed a new interactive gaming experience.

The CircleMaze is a game that furthers communication and collaboration among its players. The task for the players is to guide all of the game's pieces to the middle of the maze. Because the maze is divided into concentric rings, the pieces must pass through each ring in turn to go from the outer edge of the circular table to the center, so all the players must work together to achieve this goal. Movement of the pieces and rings produces changes in the musical score. As players turn their rings, they alter their sonic contribution to the ensemble. Players of the CircleMaze are involved in a goal-oriented game that requires them to work together as collaborative DJ's to affect musical tracks as their disks spin.

No musical experience is required, because any movement of the rings produces a complementary musical effect. It is our hope that people who might ordinarily be inhibited about participating in a public musical activity will approach the CircleMaze simply because of its game-like interaction and engaging appearance. Afterward, participants might realize that they have also been playing an unusual instrument.

#### FUTURE POTENTIAL

The CircleMaze is a single step in our continuing research into communal music-making experiences. Several larger research questions remain, such as: How does one encourage spontaneous, non-self-conscious music-making? How does one facilitate real-time collective experiences among strangers? How does one best introduce an inexperienced player to the world of music-making?

We continue to explore interaction designs and input devices that integrate a variety of approaches to combining elements of motion in music and graphics. The CircleMaze is the latest in what we hope is a long series of experiences derived from the Jam-O-Drum.

#### EXHIBITION

- The Jam-O-Drum is currently a permanent installation at the Experience Music Project in Seattle.
- The Jam-O-Drum was exhibited at Emerging Technologies, SIGGRAPH 2000.
- In 2001, the CircleMaze is included in a museum-wide exhibit on gaming at the Zeum Youth Art and Technology Center at Yerba Buena Gardens, San Francisco.

